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| STITES & HARBISON, PLLC 400 W MARKET ST SUITE 1800 LOUISVILLE, KY 40202-3352 | | | PHAM, LAM P | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2636 | |

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No. **AK**

10/812,670

Applicant(s)

ANDERSON, JOHN WILLIAM
CRISMAN

Examiner

Lam P Pham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1 rejected under 35 U.S.C. 102(b) as being anticipated by Butler et al. (GB 2308947 A).

Regarding claim 1, Butler et al. disclose a system for monitoring a physical variable at a plurality of sites comprising:

A plurality of radio frequency transponders having unique identifications comprising:

a sensor (7) for measuring a physical variable or parameter, said sensor having an output representative of said physical variable as seen in Figure 1; page 4, lines 10- page 6, lines 10-13.

a tuned circuit (9 and 10) for receiving and resonating radio frequency signal as seen in Figure 2; page 6, lines 14-16.

a power circuit (13 and 14) for converting the received radio frequency signals to direct current power for use by said transponder as seen in Figure 2; page 5, lines 8-11 and page 7, lines 3-7.

an modulator (17) for modulating the radio frequency signals having an input (Data) electrically connected to the output of the sensor (7), whereby the resonant radio

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frequency signal is representative of the transponder unique identification and the physical variable value as seen in Figure 2; page 4, lines 6-9 and page 5, lines 11-17 and page 7, lines 9-11.

at least one radio frequency reader (11) having a radio frequency transmitter and receiver to supply radio frequency signals to said transponder, and to detect the modulated radio frequency signal from said transponder as seen in Figure 2; page 6, lines 17-20 and page 8, lines 5-15 and page 5, line 8-2, and pages 9 and 10.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Butler et al.** (GB 2308947 A).

Regarding claim 2, Butler et al. fail to disclose expressly the reader device (11) further comprises a demodulator circuit, a microcontroller having an input coupled to said demodulator for storing and processing said physical variable values. However, Butler disclose "the reader detects signal transmitted by any adjacent tag, demodulates the coded data message incorporated in the signal received from the tag, verifies the

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accuracy of the information by using appropriate communications protocols, and then delivers the decoded information to an appropriate output, for example by transmitting a message to a computer for interpretation and action" as seen on page 2, lines 10-15. It would have been obvious to one skill in the art to recognize that a demodulator, a microcontroller having an input coupled to the demodulator for storing and processing said physical values must have already included in the reader in order to "demodulate the coded data message" and "verify the accuracy of the information" and store the decoded information and then delivers the decoded information to an appropriate output as shown in similar fashion in Figures 1 and 2 for the transponder circuit having control logic, memory, modulator and demodulator.

Regarding claims 3-8, Butler disclose the physical variable is a temperature, pressure, humidity, flow rate, acceleration, and other physical parameter such as force as it would be obvious to one skill in the art. (see page 9, lines 1-8 and 18-22 and page 10, lines 1-3).

5. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Butler et al.** (GB 2308947 A) in view of **Applicant Admitted Prior Art**, (page 6, lines 9-11).

Regarding claims 9 and 10, Butler et al. fail to specifically disclose the sensor in the transponder is a micro-electromechanical sensor. However, a plurality of known in the art sensors such as thermocouples, RTD's or micro electro-mechanical devices may be utilized with the transponder as admitted by the applicant as shown on page 6, lines

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9-11. Therefore, it would have been obvious to one of ordinary skill in the art to use a micro electro-mechanical sensor or other equivalent sensors such as a thermocouples and RTD's among those known sensors in a transponder for measuring a physical variable such as temperature, pressure and others as disclosed in claims 3-8 above.

Regarding claim 12, Butler et al. disclose an identification tag system having a physical parameter sensor that can be attached to an object, animal or a person for monitoring a body temperature including the following subject matters:

a plurality of radio frequency transponders having unique identifications comprising:

a sensor (7) for measuring a temperature having an output representative thereof as seen in Figure 1; page 6, lines 10-13.

a tuned circuit (9 and 10) for receiving and resonating radio frequency signal as seen in Figure 2; page 6, lines 14-16.

a power circuit (13 and 14) for converting the received radio frequency signals to direct current power for use by said transponder as seen in Figure 2; page 7, lines 3-7.

a RF modulator (17) for modulating the radio frequency signals having an input electrically connected to an output of a data line on the memory (6) which connected to the output of the sensor (7) whereby the resonant radio frequency signal is representative of the transponder unique identification and the physical variable value as seen in Figure 2; page 4, line 6-9 and page 5, lines 14-17 and page 7, lines 9-11.

at least one radio frequency reader (11) having a radio frequency transmitter and receiver to supply radio frequency signals to said transponder, and to detect the

modulated radio frequency signal from said transponder as seen in Figure 2; page 6, lines 17-20 and page 8, lines 5-15 and page 5, line 8-20.

Butler fail to disclose expressly the reader device (11) further comprises a demodulator circuit for separating the transponder unique identification and the temperature value from each of said modulated radio frequency signals and a microprocessor for storing each transponder unique identification and temperature value.

Howell disclose “the reader detects signals transmitted by any adjacent tag, demodulates the coded data message incorporated in the signals received from the tag or the transponder and verifies the accuracy of the information by using appropriate communication protocols, and then deliver its the decoded information to an appropriate output..” , it would have been obvious to one of ordinary skill in the art to recognize that a demodulator must have already been included in the reader in order to demodulate the received signals and separating the transponder unique identification and the temperature. Howell also disclose the reader could also be programmed to transmit interrogation signals and receiving identity code and physical variable values from the modulated signals of the transponders. It would also be obvious that a microprocessor with a memory means have been included in the reader in similar fashion as shown in Figures 1 and 2 for the tag, in order to store and process “decoded information” including the transponder unique identification and the temperature value. (See page 2, lines 10-15 and page 4, lines 6-9 and page 8, lines 5-15).

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6. Claims 11, 13, 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Butler et al. (GB 2308947 A) in view of **Pollack** (US 4,854,328).

Regarding claims 11 and 13, Butler disclose the tags or transponders can be attached to an object, animal or person with variation in size for identification purpose as seen on page 1, lines 5-9. However, Howell fail to disclose said plurality of transponders are disposed subcutaneously in a plurality of herb animals. It has been known in the art of animal monitoring using tag, transponder or transmitter attached to an animal's ear, implanted beneath the skin or disposed subcutaneously in a cavity or incision. **Polack**, in animal monitoring telltale and information system, teaches of a transmitting device (10) including a physiological sensor (20) for sensing temperature or other measurable parameters such as blood pressure, blood flow, pulse and the like being inserted in an animal subcutaneously or in a cavity at location indicative of the deep body temperature of the animal as seen in Figures 1-2; the abstract and col. 3, lines 21-68 and col. 4, lines 1-15. In view of Pollack's teaching, it would have been obvious to one of ordinary skill in the art to dispose a plurality of transponders subcutaneously or implant them beneath the skin of herd animals for monitoring a physical condition such as temperature, pressure, and others for detecting a disease.

Regarding claim 14, **Butler** et al. disclose the tag or transponder can be attached to an object, animal or person for identification purpose as seen on page 1, lines 5-9. However, Howell fail to disclose said transponders are attached to an ear of each of said plurality of animals. It has been known in the art of animal monitoring using tag, transponder or transmitter attached to an animal's ear, implanted beneath the

skin or disposed subcutaneously in a cavity or incision. Therefore, it would have been obvious to one skill in the art to attach a plurality of transponders to any desired body part such as an ear of plurality of animals as the most convenient location for monitoring a physical condition or identification purpose with the least effort.

Regarding claim 15, Butler disclose a method for monitoring body temperatures of an object, animal or person comprising the following steps:

a) providing each animal with a radio frequency identification transponder having a temperature sensor for sensing animal temperature;

b) providing at least one radio frequency receiver and transmitter for transmitting radio frequency signals to said transponders and receiving radio frequency signals there from representative of animal temperature;

c) providing a microcontroller (5) having a memory (6) for storing a plurality of temperature readings from said herd animals as seen in Figures 1 and 2; page 6, lines 5-21 and page 7, lines 1-2 and page 8, lines 5-15.

Butler et al. fail to disclose the step (d) for providing an alarm indication when a temperature reading from any herd animal is above a predetermined maximum.

However, **Polack**, in animal monitoring telltale and information system, teaches of a transmitting device (10) including a physiological sensor (20) for sensing temperature or other measurable parameters such as blood pressure, blood flow, pulse and the like being inserted in an animal subcutaneously or in a cavity at location indicative of the deep body temperature of the animal as seen in Figures 1-2; the abstract and col. 3, lines 21-68 and col. 4, lines 1-15. A receiver (14) provides an alarm

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indication (68) when a temperature reading from any herd animal is above a predetermined value or threshold as seen in col. 4, lines 21-65.

In view of Pollack' s teaching, it would have been obvious to one skill in the art at the time the invention was made to incorporate the step of providing an alarm indication when a temperature reading from an herd animal is above a predetermined value for early detection of a disease.

Howell et al. still fail to disclose the method for monitoring body temperatures in a plurality of herd animals for the detection of bovine respiratory disease. It would have been obvious to one skill in the art that this method of monitoring body temperatures of animals could be used for the detection of bovine respiratory disease as well as other diseases after receiving data from the sensor as a matter of intended application.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Curkendall et al. (US 6342839) disclose a method and apparatus for a livestock data collection and management system.

Toubia et al. (US 6317049) disclose an apparatus and method for locating missing persons, animals, and objects.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lam P Pham whose telephone number is 571-272-2977. The examiner can normally be reached on 9AM-6PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffery A Hofsass can be reached on 571-272-2981. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lam Pham
October 15, 2004



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